Sample Paper: CS 3360 Midterm Exam

Total Time: 60 minutes Total Points: 45

Write your name clearly. Answer all the questions.

First, read all the questions. Start with the ones that you find easier and then move on to the tougher ones. You have sufficient space; if you need more space, use the other side of your question sheet.

Name:_____ **Date:**_____

****

Question 1. True/False **[10]**

1. In Java a class called Lantern should be stored in a file called Lantern.java
2. If you want to use Eclipse to develop your Java programs, your compute must also have a JDK/JRE installed.
3. In a Java program a method that does not return anything can have no return type listed
4. Java methods are `private` by default, which means they cannot be called from outside of that file.
5. `float` and `double` variables are exactly the same.
6. `switch` statements can be rewritten by using multiple if-else statements.
7. Both RAM and ROM are random access devices. RAM can be written to and read from, but ROM can only be read from.
8. Three unique items can be represented with three bits.
9. Statement, import java.awt.* allows the program in which it is written to access all classes in the package java.awt.
10. `hook&ladder` is a valid user defined java identifier.

Question 2 Transform the following while loop into an equivalent do-while loop (make sure it produces the same output). **[3]**

```
int num = 1;

while (num < 20)

{

      num++;

      System.out.println(num);

}
```

Question 3. What's Printed?. **[16]**

`System.out.println(4 / 7 * (double)7 / 4);` `System.out.println((1 + "1 + 2" + 1 + 2);`	

`int i=3, j=5;`
`int k = ++i + j;`
`System.out.println(i + " " + j + " " + k);`	

`System.out.print("Here we go!");`
`System.out.println("12345");`
`System.out.print("Another.");`
`System.out.println();`
`System.out.println("All done.");`	

`String m1, m2, m3;`
`m1 = "The Holy Grail";`
`m2 = m1.toLowerCase();`
`m3 = m1 + " " + m2;`
`System.out.println(m3.replace('h', 'z'));`	

`for (int val = 10; val >= 0; val -= 1)`
`  if (val % 4 != 0)`
`  System.out.println(val);`	

`char c='a';`
`switch (c){`
`  case 'a': System.out.print("1");`
`  case 'b': System.out.print("2");`
`  case 'c': System.out.print("3");`
`}`	

`boolean Done = false;`
`if (Done = false)`
`  System.out.println("Not");`
`if( Done = true)`
`  System.out.println("Done ");`
`else`
`  System.out.println("Undecided ");`	

`public class Triangle {`
`  public static void chars(char ch, int n){`
`  for (int i = 1; i <= n; i++)`
`  System.out.print(ch);`
`  }`
`  public static void main(String[] args) {`
`  for (int i = 0; i <= 4; i++) {`
`  chars(' ', i); chars('*', 5-i);`
`  System.out.println();`
`  }`
`}}`	

Question 4. Write a method called `isPalindrome` that accepts an string and output `true` if the string is palindrome and output `false` if the string is not a palindrome [5]

*palindrome is a string that reads same backward and forward

Question 5 Write a Java program named "ScoreAverage.java" to calculate Average of user entered integers. Program should ask user how many integers and then accept integers from the user input. [4]

Question 6. Find errors in the program "LargestNumber.java" and write corrections (insert/update/delete) indicating the liner numbers **[7]**

You can rewrite the statement, insert a statement or delete one. Use the line number on the left to indicate the

To insert a statement, you need to provide two adjacent line numbers.

```
/*This program reads a sequence of positive integers from terminal. When
user types -1, the program will print out the largest number and exit.
*/
```

```
1.  import java.util.Scanner;
2.
3.  public class test
4.  {
5.        public void main(String[] args)
6.        {
7.              Scanner in = new Scanner(System.in);
8.              num = in.nextInt();
9.              int large = num;
10.             while(num > 0);
11.             {
12.                   if(0 > num > large)
13.                         large = num;
14.             }
15.             System.out.println("The largest number is: " + large);
16.       }
17. }
```